

CLAIMS

What is claimed is:

1. In a plasma arc torch parts distribution network, a method of providing plasma arc torch parts for use in a single plasma arc torch model through a plurality of distributors and distribution channels, the method comprising the steps of:

- (a) providing a first set of plasma arc torch parts to a first distributor; and
- (b) providing a second set of plasma arc torch parts to a second distributor,

wherein the first set of plasma arc torch parts are not interchangeable with the second set of plasma arc torch parts such that the first and second distributors maintain separate inventories of plasma arc torch parts.

2. The method according to Claim 1 further comprising the step of providing a third set of plasma arc torch parts to a third distributor, wherein the first, second, and third set of plasma arc torch parts are not interchangeable such that the first, second, and third distributors maintain separate inventories of plasma arc torch parts.

3. The method according to Claim 1, wherein at least one of the distributors is an original equipment manufacturer.

4. The method according to Claim 1, further comprising the step of establishing a first pricing structure for the first distributor and a second pricing structure for the second distributor.

5. The method according to Claim 1, wherein sales of at least one of the distributors is geographically limited.

6. The method according to Claim 1, wherein at least one of the first distributor or the second distributor sell their respective sets of parts to another distributor for final sale to an end user.

7. In a plasma arc torch parts distribution network, a method of providing plasma arc torch parts for use in a single plasma arc torch model through a plurality of distributors and distribution channels, the method comprising the steps of:

- (a) providing a first set of plasma arc torch parts to a replacement parts distributor;
- (b) providing a second set of plasma arc torch parts to an original equipment manufacturer; and
- (c) providing a third set of plasma arc torch parts to a select original equipment manufacturer,

wherein the first, second, and third set of plasma arc torch parts are not interchangeable such that the replacement parts distributor, the original equipment manufacturer, and the select original equipment manufacturer maintain separate inventories of plasma arc torch parts.

8. The method according to Claim 7, wherein at least one of the distributors is an original equipment manufacturer.

9. The method according to Claim 7, further comprising the step of establishing at least a first pricing structure for the first distributor and a second pricing structure for the second distributor.

10. The method according to Claim 7, wherein sales of at least one of the distributors is geographically limited.

11. The method according to Claim 7, wherein at least one of the first distributor, the second distributor, or the third distributors sell their respective sets of parts to another distributor for final sale to an end user.

12. A series of plasma arc torch parts for use by a plurality of distributors in a single plasma arc torch model, the series comprising:

a first set of plasma arc torch parts for use by a first distributor;
a second set of plasma arc torch parts for use by a second distributor;

and

a third set of plasma arc torch parts for use by a third distributor,

wherein the first, second, and third set of plasma arc torch parts comprise respective design features that are varied such that the first, second, and third set of plasma arc torch parts are not interchangeable, thereby causing a failure of the plasma arc torch.

13. The series of plasma arc torch parts according to Claim 12, wherein the plasma arc torch parts are selected from a group consisting of cartridge bodies, electrodes, gas distributors, tips, baffles, distal anode bodies, tip guides, tip seals, secondary caps, secondary spacers, shield caps, shield cups, start cartridges, torch heads, and torch leads.

14. The series of plasma arc torch parts according to Claim 12, wherein the failure is selected from a group consisting of a cooling fluid leak, a gas leak, physical interferences, physical gaps, electrical gaps, prevention of engagement of a parts-in-place switch, failure to match electronic keys, and failure to match magnetic keys.

15. The series of plasma arc torch parts according to Claim 12, wherein the first set of plasma arc torch parts comprises a first electrode and a first tip adapted for engagement with a first cartridge body and the second set of plasma arc torch parts comprises a second electrode and a second tip adapted for engagement with a second cartridge body, wherein the first electrode and the first tip are incompatible with the second cartridge body, and the second electrode and the second tip are incompatible with the first cartridge body such that the plasma arc torch develops a cooling fluid leak when the first electrode and the first tip are engaged with the second cartridge body and when the second electrode and the second tip are engaged with the first cartridge body.

16. The series of plasma arc torch parts according to Claim 12, wherein the first set of plasma arc torch parts comprises a first cartridge body and a first torch head, and the second set of plasma arc torch parts comprises a second cartridge body and a second torch head, wherein the first cartridge body is incompatible with the second torch head, and the second cartridge body is incompatible with the first torch head such that the plasma arc torch develops a cooling fluid leak when the first cartridge body is engaged with the second torch head and when the second cartridge body is engaged with the first torch head.

17. The series of plasma arc torch parts according to Claim 12, further comprising a plurality of common parts that are interchangeable between the first and second sets of plasma arc torch parts, wherein the common parts define different colors for each of the first and second sets of plasma arc torch parts.

18. A system for inhibiting use of an incorrect set of replacement parts in a plasma arc torch, the system comprising:

a first set of replacement parts defining a first set of design features;

a second set of replacement parts defining a second set of design features; and

a third set of replacement parts defining a third set of design features,

wherein the first, second, and third set of design features are not interchangeable such that the plasma arc torch becomes non-functional to inhibit further use of the plasma arc torch.

19. The system according to Claim 18, wherein the replacement parts are selected from a group consisting of cartridge bodies, electrodes, gas distributors, tips, baffles, distal anode bodies, tip guides, tip seals, secondary caps, secondary spacers, shield caps, shield cups, start cartridges, torch heads, and torch leads.

20. The system according to Claim 19, wherein the cartridge bodies further comprise reliefs to facilitate the cooling fluid leak.

21. The series of plasma arc torch parts according to Claim 18, wherein the plasma arc torch becomes non-functional through a failure selected from a group consisting of a cooling fluid leak, a gas leak, physical interferences, physical gaps, electrical gaps, prevention of engagement of a parts-in-place switch, failure to match electronic keys, and failure to match magnetic keys.

22. The series of plasma arc torch parts according to Claim 18 further comprising a plurality of common parts that are interchangeable between the first, second, and third sets of replacement parts, wherein the common parts define different colors for each of the first, second, and third set of replacement parts.